

Claims

- 002221" 6/22/00
1. Method of detection of a predefined signaling signal sent via an analog telecommunications line, comprising the step of:
 - applying a Fourier transform FT over successive finite time intervals of analog telecommunications signals sent via said analog telecommunications linecharacterized in that at least one of said time interval overlaps over at least a part of the next one;
 - and comprising the supplementary steps of
 - averaging of said FT over a certain number of said finite time intervals, giving an averaged spectral function;
 - analyzing said averaged spectral function for the detection of the possible presence of said predefined signaling signal.
 2. Method of detection of a predefined signaling signal according to claim 1, characterized in that each time interval overlaps over at least a part of the next one.
 3. Method of detection of a predefined signaling signal according to claim 1, characterized in that the at least partial overlaps between the time intervals are of same duration.

4. Method of detection of a predefined signaling signal according to claim 1, characterized in that the at least partial overlaps can be at least equal to a quarter of the duration of said time interval itself.
5. Method of detection of a predefined signaling signal according to claim 1, characterized in that said method is adapted to detect the said predefined signaling signal as calling alerting signals CAS.
6. A computer product comprising computer program code means adapted to perform all the steps of claim 1 when said computer product is run on a processor of a predefined signaling signal detector (1).
7. Telecommunications device comprising
- an input (2) coupled to an analog telephone line for receiving analog telecommunications signals,
 - a predefined signaling signal detector (1) connected to said input to detect a predefined signaling signal sent via said analog telecommunications line
- characterized in that said predefined signaling signal detector (1) contains
- means (5) to apply a Fourier transform FT over said analog telecommunications signals on successive time intervals while at least one of said time interval overlaps at least partially over the next one, said means (5) averaging said FT over several time intervals, obtaining an averaged spectral function,
 - and means (8, 9, 12) to analyze said averaged spectral function for the detection of the possible presence of the said predefined signaling signal.
8. Telecommunications device according to claim 7, characterized in that said means (5) while applying the said FT uses a function of specific form defining a window for the considered values of the amplitude of said analog telecommunications signals.
9. Telecommunications device according to claim 8, characterized in that said window has a rectangular shape.

10. Telecommunications device according to claim 8, characterized in that said window is a Blackman window.
11. Telecommunications device according to claim 7, characterized in that at least one of said means (8, 9, 12) which analyze said averaged spectral function, applies a comparison procedure between the amplitude of said averaged spectral function at the frequency range where said predefined signaling signal shall be expected and a typical value for the noise won out of said averaged spectral function.
12. Telecommunications device according to claim 7, characterized in that at least part of the means (5, 8, 9, 12) for the analyzing of said analog telecommunications signals to detect the possible presence of said predefined signaling signal are comprised into a processor of the said predefined signaling signal detector (1).
13. Telecommunications device according to claim 12, characterized in that it contains a computer readable medium having a program recorded thereon, said computer readable medium comprising computer program code means adapted to perform at least parts of the steps of claim 1 when said program is run on said processor.
14. Telecommunications device according to claim 7, characterized in that said predefined signaling signal detector (1) is a calling alerting signal CAS detector.
15. Predefined signaling signal detector (1) to be connected to an input (2) coupled to an analog telecommunications line for receiving analog telecommunications signals, to detect a predefined signaling signal sent via said analog telecommunications line, while said predefined signaling signal detector (1) is composed of means as set forth in claim 7.